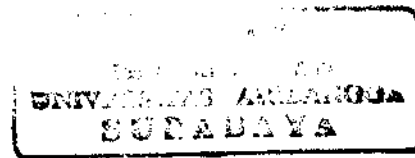


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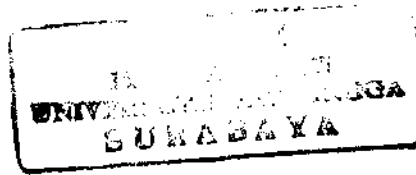
ITA RISANTI

**PENGARUH DERAJAT KEHALUSAN SERBUK BUAH
DAN LAMA DESTILASI TERHADAP KUALITAS
MINYAK ATSIRI *Coriandrum sativum* L**



**FAKULTAS FARMASI UNIVERSITAS AIRLANGGA
BAGIAN ILMU BAHAN ALAM
SURABAYA
2003**

Lembar Pengesahan



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MINYAK ATSIRI *Coriandrum sativum* L**

SKRIPSI

**Dibuat Untuk Memenuhi Syarat Mencapai Gelar Sarjana Sains
Pada Fakultas Farmasi Universitas Airlangga**

2003

Oleh :

**ITA RISANTI
NIM : 059912205**

**Skripsi ini telah disetujui
Tanggal 25 Agustus 2003**

Oleh :

Pembimbing Utama

A handwritten signature in black ink, appearing to read "Hj. Mangestuti Agil".

Dr. Hj. Mangestuti Agil, MS.
NIP. 130 809 085

Pembimbing Serta

A handwritten signature in black ink, appearing to read "Herra Studiawan".

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ABSTRACT

The Effect of Particle Size of Kernel and Distillation Time on Essential Oil of *Coriandrum sativum* L

The water-steamed distillation of grinded kernel of *Coriandrum sativum* L 2 mm, 1 mm and 0,5 mm of particle size has been carried out. The effect of particle size and distillation time could be seen from the rendement , the percentage of main component area of chromatographic profile and the physical characteristic (optical rotation, refraction index and solubility in ethanol 70 %).

Kernel with 2 mm of particle size gave rendement of 0,714 %. The distillate fraction perhour of distillation process has resulting for 79 % ; 70 % ; 67 % ; 65,5 % and 59 % of main component area of gas chromatographic profile. This particle size gave the value of optical rotation (20°C) for +12,47 ; +10,40 ; +10,01 and +9,59 (the fifth hour distillate couldn't be determined because of limited sample), the refraction index (20°C) for 1,4621 ; 1,4621 ; 1,4621 ; 1,4622 and 1,4641 and the solubility in ethanol 70 % for 1,10 ; 1,10 ; 1,20 ; 1,20 and 1,50 part of ethanol 70 %.

Kernel with 1 mm of particle size gave rendement of 0,415 %. The distillate fraction perhour of distillation process has resulting for 64,1 % ; 78,4 % ; 82 % ; 82 % ; 77,7 % ; 75,9 % ; and 73 % of main component area of gas chromatographic profile. This particle size gave the value of optical rotation (20°C) for +12,35 ; +12,50 ; +12,63 ; +12,54 ; +11,77 ; +11,65 ; +11,42 and +10,94 (the ninth hour distillate couldn't be determined because of limited sample), the refraction index (20°C) for 1,4631 ; 1,4621 ; 1,4614 ; 1,4614 ; 1,4614 ; 1,4619 ; 1,4621 ; 1,4624 and 1,4624 and the solubility in ethanol 70 % for 1,53 ; 1,13 ; 1,12 ; 1,12 ; 1,15 ; 1,20 ; 1,30 and 1,60 part of ethanol 70 %(the ninth hour distillate couldn't be determined because of limited sample).

Kernel with 0,5 mm of particle size gave rendement of 0 % because the essential oil wasn't came out in this particle size.

Keyword : *Coriandrum sativum* L kernel , particle size, distillation time, water-steamed distillation